REMARKS

Applicants have received and reviewed an Office Action dated August 30, 2005. By way of response, Applicants have amended claim 1 and canceled claim 2 without prejudice. No new matter was added. The pending claims are supported by the specification. Claims 4-17 are withdrawn from consideration and claims 1-3 are being examined.

For the reasons given below, Applicants submit the pending claims are in condition for allowance and notification to that effect is earnestly solicited.

Restriction Requirement

Applicants acknowledge the selection with traverse to prosecute the invention of Group I, claims 1-3, and that claims 4-17 are withdrawn from consideration.

Species Election Requirement

At page 3 of the Office Action the species election requirement asserts that Applicant must elect specie for "each of the above genera". Applicants cannot discern from page 2 of the Office Action the genera to which page 3 refers. Page 2 lists groups of claims for the restriction requirement and also describes the restriction requirement. The text on page 3 above the quoted comment does not identify any genera. Accordingly, it appears to Applicants that the Office Action does not identify any genera from which species must be selected.

Applicants respectfully request the Examiner to more specifically point out what constitutes the genera from which species must be elected. Upon designation of the genera, Applicants will then elect appropriate specie.

Specification

The Office Action asserts that the summary of the invention includes text at page 14 of the application. Applicants respectfully note that the text under the heading "Summary of the present invention" is found in the present specification at page 8, lines 1-18. The heading "Detailed description of the present invention" is found at page 8, line 19 of the present specification. Accordingly, Applicants have not altered the text at page 14 of the present application.

Claim Rejections Under 35 U.S.C. § 112

The Examiner rejected claims 1-3 under 35 U.S.C. § 112, second paragraph. The Examiner objected to certain terms employed in the claims. Applicants respectfully traverse this rejection.

The Office Action objected to the term "extraordinarily" in claim 1 and the terms "stable" and "usable" in claim 2. Solely to expedite prosecution and without acquiescing to the Examiner's arguments, Applicants have amended claim 1 to delete the term "extraordinarily" from claim 1 and have canceled claim 2.

The Office Action objects to the recitation in claim 1 of "2,00,000" Daltons. Applicants have corrected the recitation in claim 1 to read 200,000 Daltons. Applicants have also corrected this typographical error throughout the specification.

Applicants note that the description of the polymers in the application as filed includes polymers with molecular weight less than or equal to 200,000 Daltons. The general polymer structure found in claim 1 and throughout the specification (e.g., at least at pages 1, 8, 9, 11, and 17) provides polymers with molecular weight not exceeding 200,000 Daltons. This can be calculated, for example, by selecting the largest substituents in the polymer structure and setting m to its largest listed value of 500 (range 3 to 500) and n to its largest listed value of 50 (range 2 to 50). In addition, Tables 1 and 2 in the Examples at pages 21 and 22 of the specification as filed refer to "Tri-block BAB Copolymers" in which A has a molecular weight of 90,000 or less and B has molecular weight of 638. These polymers also have molecular weight not exceeding 200,000.

Therefore, the specification as filed supports the recitation of copolymers with molecular weight ranging between 2,000 Daltons to 200,000 Daltons.

Accordingly, the pending claims fully comply with section 112, second paragraph, and withdrawal of this rejection is respectfully requested.

Claim Rejections under 35 U.S.C. § 103

S/N 10/697,970

The Examiner rejected claims 1-3 under 35 U.S.C. §103(a) as obvious over Loomis (U.S. Patent 6,403,758) in view of Mandeville et al. (U.S. Patent 5,891,862). Applicants respectfully traverse this rejection.

The present application teaches how to combine short and long copolymers by means of the linking structure disclosed in claim 1 to create a tri-block copolymer. Claim 1 recites a tri-block copolymer wherein one chain of the copolymer includes 3 to 500 monomeric units and two chains include 2 to 50 monomeric units (see also, page 1, lines 5-15). The linkage between the polymer blocks is provided by an ester or amide link (claim 1 and page 1, line 12). The shorter blocks can include carbohydrate moieties pendant from side chains of the monomeric units.

In contrast, Loomis provides only generic disclosure of some tri-block copolymers, with the formula xABAx (col. 4, lines 11-18). None of the x, A, or B of Loomis are even similar to the blocks of the presently claimed copolymer. As a consequence, the specific tri-block copolymer as claimed are not and cannot be disclosed or suggested by Loomis. Therefore, a tri-block copolymer with the presently claimed structure is not obvious in view of Loomis.

In addition, Loomis also does not teach the use of an ester or amide linkage between each block. Thus, the structure that performs the linking function in the presently claimed invention is not mentioned by Loomis.

Loomis discloses the use of polysaccharides in the backbone of polymer chains. The presently claimed invention does not use polysaccharides as part of the backbone of the chain of the tri-block copolymer. The side chains of certain monomers in the presently claimed polymer can contain carbohydrate (page 1, lines 14-17). Thus, the presently claimed invention provides that carbohydrates, including N-Acetyl Glucosamine, may be pendant from one or two of the blocks. They are not in the chain forming the block. For at least these reasons, the presently claimed invention is not obvious in view of Loomis.

The Mandeville et al. reference does not remedy the shortcomings of Loomis. The Mandeville et al. reference fails to teach one skilled in the art how to create and link together a tri-block copolymer including three copolymers. Mandeville et al. only disclose how to form a polymer or copolymer from monomeric units including fucoside moieties pendant from the side chains.

The Mandeville et al. reference fails to disclose the monomeric units, side chains, or linking groups employed in the presently claimed tri-block co-polymer. Mandeville employs a sulfur atom in the side chain of the monomeric unit in Formula VIII as a link to the fucoside moiety. The presently claimed tri-block co-polymer does not include a sulfur atom on the side chain of the monomeric unit. The presently claimed tri-block copolymer includes a sulfur atom in the group that couples one block to another block, which group is at the end of the block. The moiety that forms a bond between the blocks, "X" as recited in claim 1, is an ester or amide link, and not a sulfur atom.

Because the linking structure and side chains as presently claimed are neither taught nor suggested by Mandeville et al., the presently claimed invention is not anticipated by or obvious in view of Mandeville et al.

Lastly, the presently claimed invention does not make use of fucoside or a fucoside moiety. Mandeville et al. teach monomers including a fucoside moiety (abstract and col. 2, lines 18-20). The presently claimed invention recites a block copolymer having the formula recited in claim 1. Fucoside is not recited in claim 1. Therefore, one skilled in the art would not learn how to create a block copolymer including two copolymers and an ester or amide link without a fucoside moiety present. The presently claimed invention is not anticipated by or obvious in view of Mandeville et al.

For at least the foregoing reasons, the presently claimed invention is not anticipated by or obvious in view of the Loomis and Mandeville et al. references. Applicants respectfully request withdrawal of this rejection.

S/N 10/697,970

Summary

In summary, Applicants submit that each of claims 1-3 are in condition for allowance. The Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below, if the Examiner believes that doing so will expedite prosecution of this application.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

Date: Dec 28, 2005

Mark T. Skoog
Reg. No. 40,178
MTS:HJK:kf